

# California-Mexico Border Activities Update

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# Border Region Overview

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- ◆ Social, economic and political contrasts
- ◆ Fast growth rate
- ◆ Shared environmental problems
- ◆ Two distinct binational air basins



# Population Trends

	Current Population	Annual Growth
San Diego County	2,813,800	1.3%
Municipality of Tijuana	1,210,800	5.0%
Imperial County	142,400	3.0%
Municipality of Mexicali	764,600	2.4%

# Air Quality Monitoring

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- ◆ Six stations in Tijuana (initiated 1996)
- ◆ Six stations in Mexicali (1997)
- ◆ Two stations in Calexico (1997)
- ◆ One station in Tecate (2000)
- ◆ Funded by U.S. EPA



# Air Quality Assessment

## San Diego-Tijuana

- San Diego attains national air quality standards for O<sub>3</sub>, CO, and PM<sub>10</sub>
- Tijuana exceeds CO and PM<sub>10</sub> standards

## Imperial Valley-Mexicali

- Both areas exceed O<sub>3</sub>, CO, and PM<sub>10</sub> standards
- High levels of toxic air contaminants in both areas

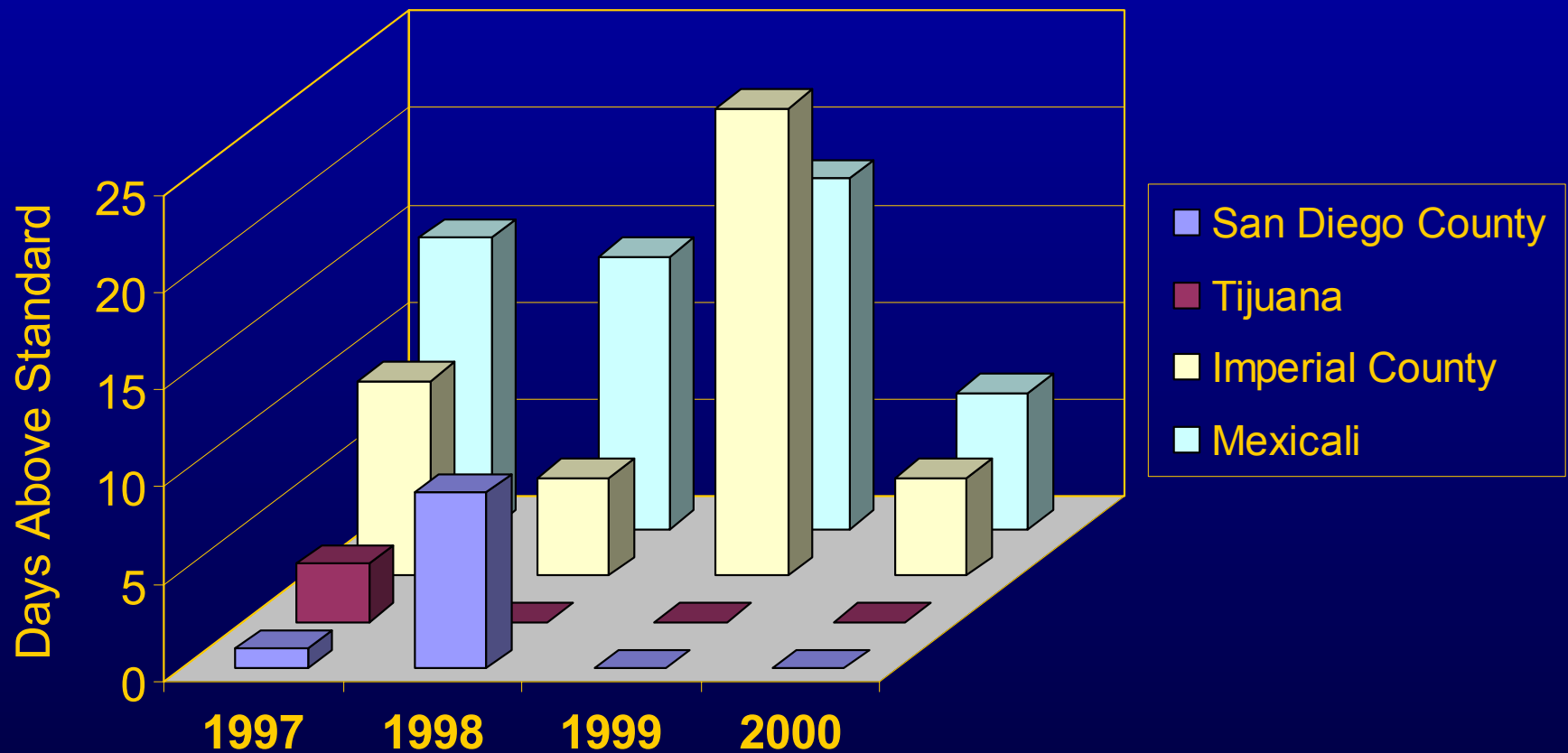
# Ozone

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- ◆ San Diego County attained U.S. national standard in 2001
- ◆ No exceedances recorded in Tijuana from 1998 to 2000
- ◆ Average of 11 exceedances per year in Imperial County
- ◆ Average of 14 exceedances per year in Mexicali

# Days Exceeding National Ozone Standard

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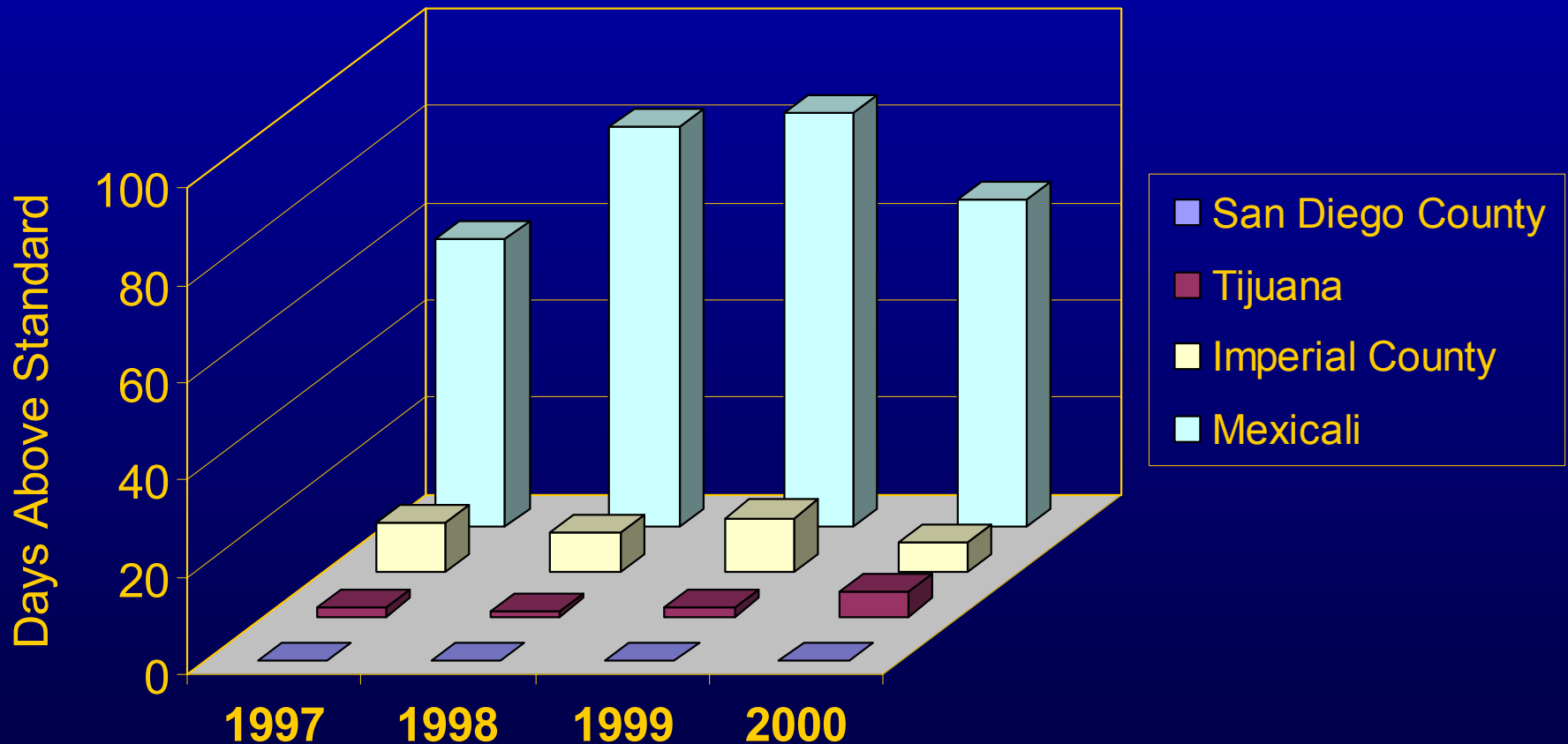


# Carbon Monoxide

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- ◆ San Diego: no exceedances since 1990
- ◆ Tijuana averaged 3 exceedances per year in 1998-2000
- ◆ Imperial County leads the state in annual exceedances
- ◆ Mexicali averaged 73 exceedances per year in 1998-2000

# Days Exceeding National CO 8-Hour Standard



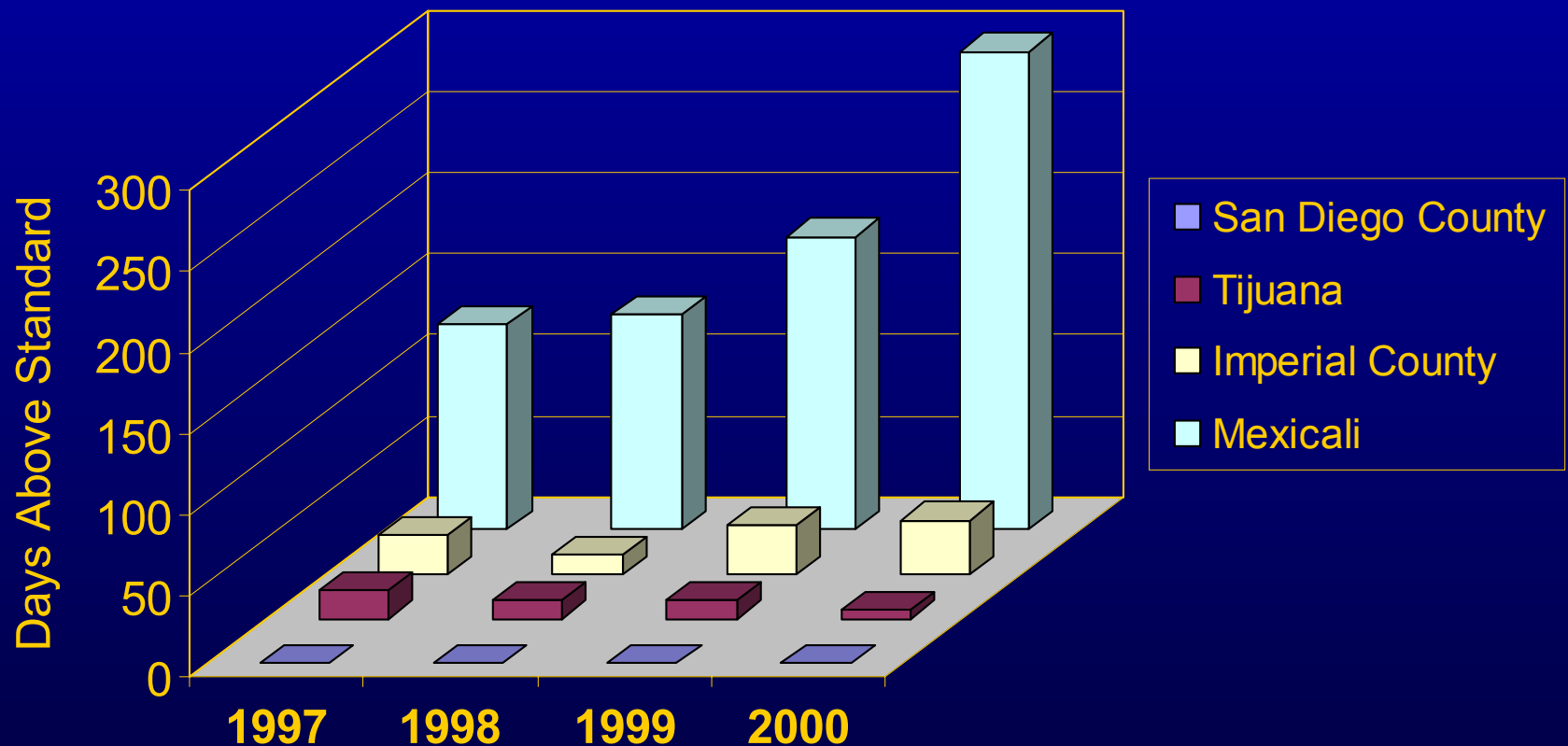
# PM10 Exceedances

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- ◆ San Diego: no exceedances of the national 24-hour standard since 1993
- ◆ Tijuana averaged 12 exceedances per year in 1998-2000
- ◆ Imperial County leads the state in annual exceedances
- ◆ Mexicali averaged 183 exceedances per year in 1998-2000

# Days Exceeding National PM10 Standard\*

\*Calculated from 1-in-6 day sampling



# Calexico

## Toxic Air Contaminants

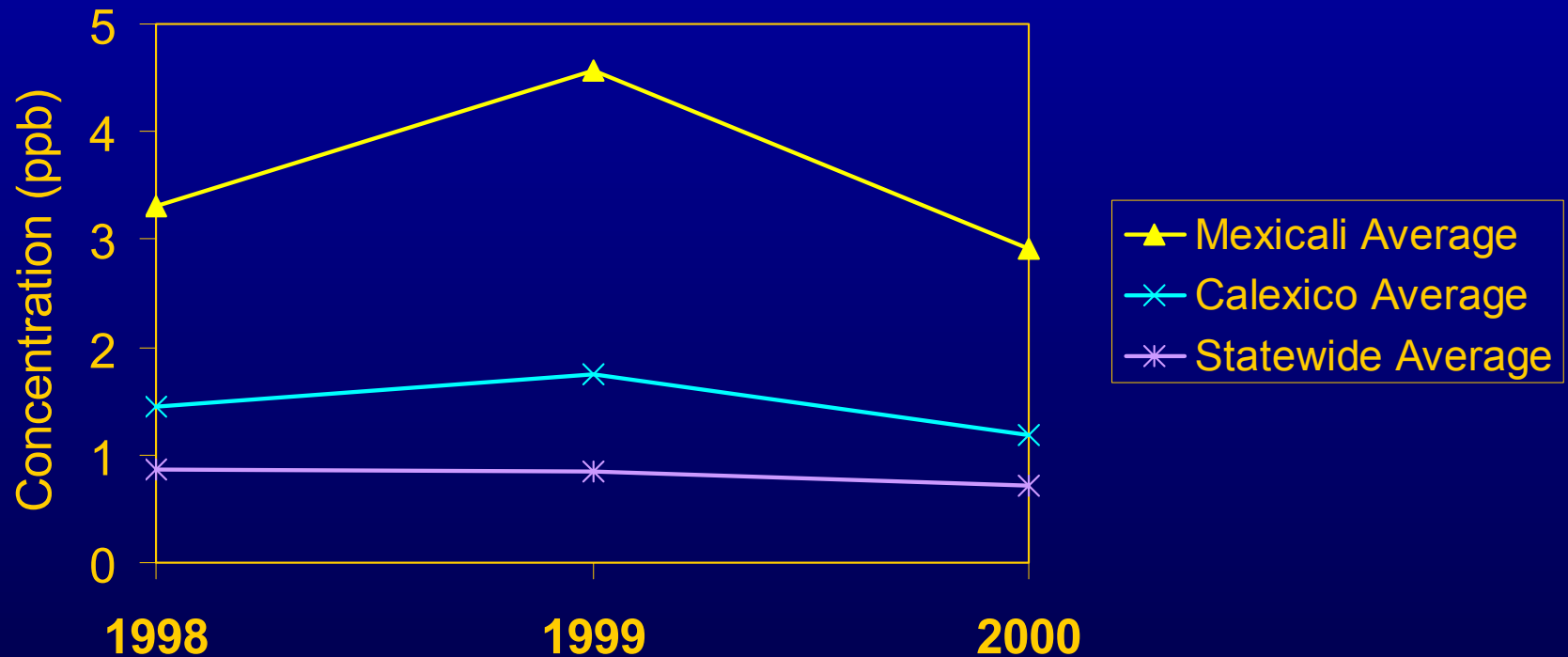
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Statewide Ranking by  
Average Concentration

	1998	1999	2000
Benzene	3	1	2
1,3-butadiene	5	2	3
Acetaldehyde	6	2	4
Formaldehyde	8	4	3

# Benzene Concentrations

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# Pollution Sources

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- ◆ Motor vehicles are primary source of ozone precursors, CO, and toxics
- ◆ Stationary sources also contribute ozone precursors and possibly toxics
- ◆ Unpaved roads and windblown emissions are primary contributors to particulate pollution



Aerial view of the international border  
looking from Imperial County to Mexicali

# ARB Border Program Activities

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- ◆ Participate in U.S. EPA, Cal/EPA border environmental working groups
- ◆ Establish cooperative relationships
- ◆ Operate air monitoring network
- ◆ Assist in development of air quality strategies

# Tijuana Smog Check Pilot Project

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- ◆ Collaborative effort between Cal/EPA, BAR, and City of Tijuana
- ◆ Initial application to city-owned fleet
- ◆ Possible expansion to private fleets, public transportation, and motorists
- ◆ State of Baja California and City of Mexicali are monitoring progress

# Heavy Duty Diesel Inspections

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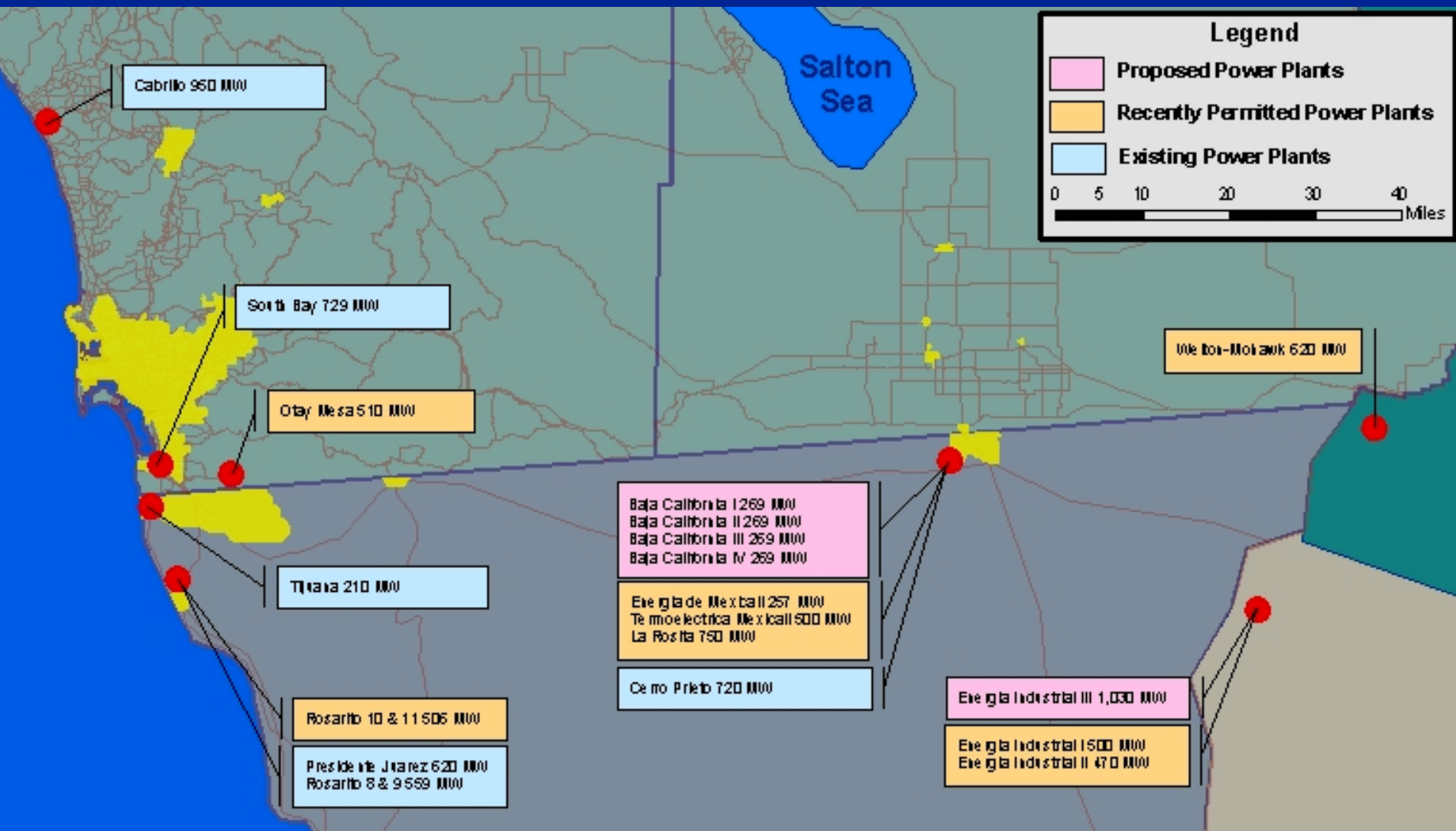
- ◆ Inspections required by State law
- ◆ Full-time crew at Otay Mesa and Calexico
- ◆ 50% initial failure rate
- ◆ 12% current failure rate

# Border Area Power Plants

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# Border Area Power Plants Under Development



# Emission Limits (parts per million)

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	Criteria	NO <sub>x</sub>	CO
California	CA BACT	2.5	6.0
Arizona	BACT	2.5	6.0
Mexico:	Critical Zone*	42	No limit
Mexico:	Rest of Border Area	143	No limit

\*Tijuana

# Power Generation Environmental Concerns

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- ◆ Air pollution impacts
- ◆ Water supply and water quality impacts
- ◆ Community health effects
- ◆ Diminished potential for sustainable growth

# Power Plant Coordination Efforts

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- ◆ Participation in discussions with project proponents
- ◆ Joint declaration for Border States Governors Conference
- ◆ U.S. EPA and SEMARNAT coordination meeting in April, 2002

# Summary

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- ◆ Imperial County border communities trail the state in air quality improvements
- ◆ Spillover effect from Mexicali is evident
- ◆ Cross-border partnerships have resulted in air quality improvement strategies
- ◆ Continued binational cooperation is necessary